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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,944	02/10/2000	Srinivasan Venkatesan	OBC-98	4578

24963 7590 10/07/2002

ENERGY CONVERSION DEVICES, INC.  
2956 WATERVIEW DRIVE  
ROCHESTER HILLS, MI 48309

EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 10/07/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/501,944

Applicant(s)

VENKATESAN ET AL.

Examiner

Julian A. Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1, 4-7, 10-13, 15, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1, 4, 6, 7, 10, 12, 13, 15, 17 is/are rejected.
- 7) ☐ Claim(s) 5, 11 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Remarks***

This Office Action is responsive to Applicant's amendment filed July 10, 2002.

This Office Action presents a new ground of rejection based on new prior art uncovered during an updated prior art search. The examiner regrets the late presentation of this new ground of rejection, particularly in view of the withdrawal of allowable subject matter to the extent that the present claims recite a limitation in the alternative, e.g. "pectin or molasses". In light thereof, this Office Action is made NON-FINAL.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 7, 10, 13, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikoma et al. (U.S. Pat. 5,077,149) in view of Bougauchi et al. (Abstract, Japanese Patent 02244555)

Ikoma teaches an alkaline electrochemical cell comprising a positive electrode having an active material including nickel hydroxide. (col. 4 line 52-60)

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A positive electrode was produced in the following manner. A spherical nickel hydroxide powder, cobalt powder, cobalt hydroxide powder and zinc oxide powder were mixed at a weight ratio of 100:7:5:2 and water was added to the mixture to obtain a paste. This paste was filled in a foamed nickel porous matrix having a porosity of 95% which was an electrode substrate and the porous matrix was dried, pressed and then cut to a given size to obtain the nickel positive electrode. The

While Ikoma does not explicitly teach a binder comprising pectin, Bougauchi teaches pectin as a binder for an alkaline electrochemical cell. (Abstract) Thus, the skilled artisan would find obvious to modify Ikoma's invention by employing pectin as a binder for reasons such as improving the fluidity of the paste during positive electrode formation and enhancing the mechanical strength of the resulting electrode.

As to claim 15, the negative electrode comprises a hydrogen storage active material. (col. 4 line 21-23)

20 A hydrogen absorbing alloy powder for the negative electrode used in this example was prepared in the following manner. The composition of the alloy was

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikoma et al. in view of Bougauchi et al. as applied to claims 1, 4, 7, 10, 13, 15, and 17 above.

The teachings of Ikoma and Bougauchi are discussed above.

Ikoma in view of Bougauchi does not explicitly teach the binder to be present within the range of 0.1 to 2.0 weight percent of the active material composition. However, absent of unexpected results, the amount of binder or stabilizing agent is considered an optimizable parameter for result-effective variables. The amount of binder is considered result-effective as

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its amount directly correlates with increased stability in adhesion, dispersion or cohesiveness within the electrode structure. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)

### ***Allowable Subject Matter***

Claims 5, 11 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding an alkaline electrochemical cell employing a nickel hydroxide active material and a binder comprising molasses.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



am

September 12, 2002



Patrick Ryan

Supervisory Patent Examiner  
Technology Center 1700